

12-13-07

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/678,720
Filing Date	October 3, 2003
First Named Inventor	Robert C. Lam
Art Unit	1771/Conf. #6119
Examiner Name	Jennifer A. Steele
Attorney Docket Number	01168/BW00076

### ENCLOSURES (Check all that apply)

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Fee Transmittal Form<br><input type="checkbox"/> Fee Attached<br><input checked="" type="checkbox"/> Amendment/Reply<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Extension of Time Request<br><input type="checkbox"/> Express Abandonment Request<br><input type="checkbox"/> Information Disclosure Statement<br><br><input type="checkbox"/> Certified Copy of Priority Document(s)<br><input type="checkbox"/> Reply to Missing Parts/<br>Incomplete Application<br><input type="checkbox"/> Reply to Missing Parts<br>under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Licensing-related Papers<br><input type="checkbox"/> Petition<br><input type="checkbox"/> Petition to Convert to a<br>Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation<br>Change of Correspondence Address<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Request for Refund<br><input type="checkbox"/> CD, Number of CD(s) _____<br><input type="checkbox"/> Landscape Table on CD | <input type="checkbox"/> After Allowance Communication to TC<br><input type="checkbox"/> Appeal Communication to Board<br>of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to TC<br>(Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input checked="" type="checkbox"/> Other Enclosure(s) (please identify<br>below):<br>Return Postcard |
|---|--|---|

Remarks

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name Emch, Schaffer, Schaub & Porcello Co., L.P.A.

Signature

Printed name Patrick P. Pacella

Date Dec 12, 2007

Reg. No. 25,463

### CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature

Typed or printed name Kathy A. Burgess

Date 12-12-07

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



01168/BW00076

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Robert C. Lam  
Serial No: 10/678,720  
Filed: October 3, 2003

Exr. Jennifer A. Steele  
Art Unit: 1771  
Confirmation No.: 6119

For: FRICTION MATERIAL CONTAINING PARTIALLY  
CARBONIZED CARBON FIBERS

Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

December 11, 2007

**RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF**

Sir:

In response to the Notice of Non-Compliant mailed December 3, 2007,  
please substitute the attached Appeal Brief for the Appeal Brief filed 10 September  
2007.

REMARKS

The attached new Brief now complies with 37 CFR 41.37. Accordingly, Appellants respectfully asks that the new Brief be entered.

Respectfully submitted,

EMCH, SCHAFFER, SCHAUB  
& PORCELLO CO., L.P.A.

A handwritten signature in black ink, appearing to read "P. Pacella", is written over the printed name.

Patrick P. Pacella  
Reg. No.: 25,463

P.O. Box 916  
Toledo, Ohio 43697  
Ph: (419) 243-1294  
Fax (419) 243-8502  
PPP/kab



01168/BW00076

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Robert C. Lam

Serial No: 10/678,720

Filed: October 3, 2003

For: FRICTION MATERIAL CONTAINING PARTIALLY  
CARBONIZED CARBON FIBERS

Exr. Jennifer A. Steele

Art Unit: 1771

Confirmation No.: 6119

Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

November 15, 2007

**APPELLANT'S BRIEF ON APPEAL**

Sir:

This brief on appeal is being filed in accordance with 37 C.F.R. §1.192 by  
Appellant in the matter of the above-identified patent application.

**REAL PARTY IN INTEREST**

The real party in interest is BorgWarner, Inc., 3850 Hamlin Road, Auburn  
Hills, MI 48326, the assignee of the present invention.

### RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences which will directly affect or be directly affect or be directed affected by having a bearing on the Board's decision in the pending appeal.

### STATUS OF CLAIMS

This appeal is based on the final rejection of claims 6 – 9, 12 – 13 and 29. Claims 23 – 28 are withdrawn. Claims 1 - 5, 10 – 11 and 14 – 22 are canceled. Only claims 6 – 9, 12 – 14 and 29 are pending in this application.

### STATUS OF AMENDMENTS

A Response After Final Rejection was filed on October 19, 2007. Only Remarks were presented in the Response After Final. The claims were not amended. Only claims 6 – 9, 12 – 13 and 29 remain in the application. No amendments have been filed subsequent to the appealed final rejection.

### SUMMARY OF CLAIMED SUBJECT MATTER

Only claim 6 is an independent claim.

Claim 6 recites a friction material comprising a fibrous base material impregnated with at least one curable resin (page 8, line 17), the fibrous base

material comprising a porous primary layer (page 7, line 16), and one secondary layer (page 7, line 19), the secondary layer comprising partially carbonized carbon fibers (page 7, line 22) on at least one surface of the primary layer (page 8, lines 7 – 9). The partially carbonized carbon fibers comprises 3% to about 90% of the surface area of the primary layer (page 16, lines 21 – 23). The secondary layer comprises about 5% to about 35%, by weight, of partially carbonized carbon fibers, based on the weight of the fibrous base material (page 7, lines 22 – 24 and page 24, lines 6 – 8). The partially carbonized carbon fibers are 65 to 90% carbonized (page 7, lines 20 – 21). The porous primary layer comprises a plurality of less fibrillated aramid fibers (page 7, lines 16 – 18) having a freeness of at least about 300 on the Canadian Standard Freeness (CSF) index (page 14, lines 25 – 27). Optionally one or more of the following: cotton fibers, carbon fibers, carbon particles, and, at least one filler material are present (page 7, lines 18 – 19).

#### GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 6 – 9, 12 – 13 and 29 are patentably distinct under 35 U.S.C. §103(a) over Lam (EP 1203897) in view of Brassell (US 4772508) and Tradewell (4444574).

## ARGUMENT

### I. SUMMARY

Claims 6 – 9, 12 – 13 and 29 are patentably distinct in the recitation of the secondary layer comprising about 5% to about 35%, by weight, of partially carbonized carbon fibers, based on the weight of the fibrous base material, wherein the partially carbonized carbon fibers are 65 to 90% carbonized.

Nowhere does Lam disclose or suggest that the secondary layer of the friction material comprises carbon fibers.

Lam teaches a friction material of carbon fibers. Lam does not teach a friction material of carbon fibers in the secondary layer. To substitute carbon fibers of any kind for the carbon particles of Lam does not meet the “common sense” test of Teleflex let alone the Federal Circuit’s “teaching, suggestion, motivation” test.

Appellants respectfully submit that the “common sense” test of KSR Int’l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1734, 82 USPQ2d 1385 (2007) and the Federal Circuit’s “teaching, suggestion, motivation” test would not teach what is claimed.

Lam only teaches carbon fibers in the primary or base layer. Lam does not teach carbon fibers in the secondary layer. Further, Lam clearly distinguishes between carbon fibers and carbon particles.

Of utmost importance is the reliance upon the facts and not conclusory assertions to establish obviousness. Assumptions about knowledge in the art

cannot substitute for evidence thereof.

II. CLAIMS 6 – 9, 12 – 13 AND 29 ARE PATENTABLY DISTINCT UNDER 35 U.S.C. §103(a) OVER LAM (EP 1203897) IN VIEW OF BRASSELL (US 4772508) AND TRADEWELL (4444574).

Claims 6 – 9, 12 – 13 and 29 are patentably distinct over the combinations of references in the recitation of the secondary layer comprising about 5% to about 35%, by weight, of partially carbonized carbon fibers, based on the weight of the fibrous base material, wherein the partially carbonized carbon fibers are 65 to 90% carbonized.

Nowhere does Lam disclose or suggest that the secondary layer of the friction material comprises carbon fibers.

Lam teaches a friction material of carbon fibers. Lam does not teach a friction material of carbon fibers in the secondary layer. To substitute carbon fibers of any kind for the carbon particles of Lam does not meet the “common sense” test of Teleflex let alone the Federal Circuit’s “teaching, suggestion, motivation” test.

Appellants respectfully submit the “common sense” test of KSR Int’l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1734, 82 USPQ2d 1385 (2007) and the Federal Circuit’s “teaching, suggestion, motivation” test would not teach what is claimed.

Of utmost importance is the reliance upon the facts and not conclusory



assertions to establish obviousness. Assumptions about knowledge in the art cannot substitute for evidence thereof.

It remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed. Assumptions about knowledge in the art cannot substitute for evidence thereof.

The Examiner states that Lam teaches carbon fibers (page 9, lines 10 – 13).

Appellants respectfully submit that Lam only teaches carbon fibers in the primary or base layer. Lam does not teach carbon fibers in the secondary layer. Further, Lam clearly distinguishes between carbon fibers and carbon particles. One is not a substitute for the other.

Clearly no reason exists for placing carbon fibers in the secondary or top layer.

Nowhere does Lam disclose or suggest that the secondary layer of the friction material comprises partially carbonized carbon fibers.

Nowhere does Lam disclose or suggest that the secondary layer of the friction material comprises 5% to 35%, by weight, of partially carbonized carbon fibers.

Nowhere does Lam disclose or suggest that the secondary layer of the friction material comprises partially carbonized carbon fibers, wherein the partially

carbonized carbon fibers are 65 to 90% carbonized.

Lam is deficient. Brassell and Tradewell do not supply those deficiencies. The rejection attempts to add to Lam what is not there.

The rejection fails to establish a prima facie case of obviousness because the applied prior art does not teach or suggest the key elements of what is claimed. See In re Kahn, 441 F.3d 977, 985-86, 78 U.S.P.Q. 1329, 1335 (Fed.Cir. 2006).

The rejection does not provide any evidentiary basis to support the findings. See In re Ahlert, 424 F.2d 1088, 1091, 165 U.S.P.Q. 418, 420-21 (CCPA 1970).

Further, Brassell and Tradewell are non-analogous art.

Appellants invention relates to wet friction materials used in advanced transmission and braking systems. The friction materials must remain stable at high temperatures in high pressure application.

The filtering of Brassell and Tradewell have nothing to do with friction materials for advanced transmissions. See e.g. In re Zurko, 258 F.3d 1379, 1386 (Fed.Cir. 2001).

No basis in fact or theory exists for picking and choosing from Brassell and Tradewell as suggested.

Appellants respectfully submit that one cannot rely on hindsight in reaching an obvious determination. It is essential that the decision maker forget what he or

she has been taught by the claimed invention. One cannot use piecemeal reconstruction to arrive at the claimed invention. See Golight v. Walmart, CAFC 02-1608, 2004. Also see In re Fine, 837 F.2d 1071 5 USPQ 1596 (CAFC 1988). The rejection ignores the express limitations in the claims. See Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc. 796 F2d 443, 448-449, 240 USPQ 416, 420 (Fed. Cir. 1986).

The rejection clearly is based on conclusory assertions and assumptions not found in the prior art.

### III. CONCLUSION

Claims 6 – 9, 12 – 13 and 29 are patentably distinct over the combinations of references in the recitation of the secondary layer comprising about 5% to about 35%, by weight, of partially carbonized carbon fibers, based on the weight of the fibrous base material, wherein the partially carbonized carbon fibers are 65 to 90% carbonized.

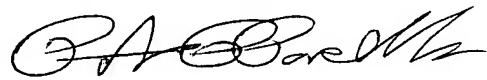
Nowhere does Lam disclose or suggest that the secondary layer of the friction material comprises carbon fibers.

Lam only teaches carbon fibers in the primary or base layer. Lam does not teach carbon fibers in the secondary layer. Further, Lam clearly distinguishes between carbon fibers and carbon particles. One is not a substitute for the other.

In view of the foregoing, Appellants respectfully request that The Board reverse the Examiner's rejection. Issuance of a patent on this application therefore is respectfully requested.

Respectfully submitted,

EMCH, SCHAFFER, SCHAUB  
& PORCELLO CO., L.P.A.

A handwritten signature in black ink, appearing to read "P. Pacella", written in a cursive style.

Patrick P. Pacella  
Reg. No. 25,463

P.O. Box 916  
Toledo, Ohio 43697  
Ph: (419) 243-1294  
Fax (419) 243-8502  
PPP/kab

CLAIMS APPENDIX

6. A friction material comprising a fibrous base material impregnated with at least one curable resin, the fibrous base material comprising a porous primary layer and one secondary layer, the secondary layer comprising partially carbonized carbon fibers on at least one surface of the primary layer, the partially carbonized carbon fibers comprising 3% to about 90% of the surface area of the primary layer, wherein the secondary layer comprises about 5% to about 35%, by weight, of partially carbonized carbon fibers, based on the weight of the fibrous base material, wherein the partially carbonized carbon fibers are 65 to 90% carbonized, and wherein the porous primary layer comprises a plurality of less fibrillated aramid fibers having a freeness of at least about 300 on the Canadian Standard Freeness (CSF) index, and optionally one or more of the following: cotton fibers, carbon fibers, carbon particles, and, at least one filler material.

7. The friction material of claim 6, wherein the less fibrillated aramid fibers have a freeness of about 430 to about 650 on the Canadian Standard Freeness index.

8. The friction material of claim 6, wherein the aramid fibers have average fiber lengths in the range of about 0.5 to about 10 mm.

9. The friction material of claim 6, wherein the filler comprises diatomaceous earth.

12. The friction material of claim 6, wherein the primary layer comprises about 10 to about 50%, by weight, less fibrillated aramid fiber; about 10 to about 35%, by weight, carbon particles; about 5 to about 20%, by weight, cotton fibers; about 2 to about 15%, by weight, carbon fibers; and, about 10 to about 35%, by weight, filler material.

13. The friction material of claim 12, comprising in percent, by weight, about 38 to 40% less fibrillated aramid fibers, about 13 to about 15% carbon particles; about 10 to about 12% cotton fibers; about 4-6% carbon fibers; and about 28 to about 30% filler material.

29. The friction material of claim 6 wherein the primary layer further comprises about 5% to about 35%, by weight, of partially carbonized carbon fibers, based on the weight of the primary layer, and

wherein the partially carbonized carbon fibers of the primary layer are 65 to 90% carbonized.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

No decision has been rendered by a court or the Board in any proceedings in related appeals and interferences.



CLAIMS APPENDIX

6. A friction material comprising a fibrous base material impregnated with at least one curable resin, the fibrous base material comprising a porous primary layer and one secondary layer, the secondary layer comprising partially carbonized carbon fibers on at least one surface of the primary layer, the partially carbonized carbon fibers comprising 3% to about 90% of the surface area of the primary layer, wherein the secondary layer comprises about 5% to about 35%, by weight, of partially carbonized carbon fibers, based on the weight of the fibrous base material, wherein the partially carbonized carbon fibers are 65 to 90% carbonized, and wherein the porous primary layer comprises a plurality of less fibrillated aramid fibers having a freeness of at least about 300 on the Canadian Standard Freeness (CSF) index, and optionally one or more of the following: cotton fibers, carbon fibers, carbon particles, and, at least one filler material.

7. The friction material of claim 6, wherein the less fibrillated aramid fibers have a freeness of about 430 to about 650 on the Canadian Standard Freeness index.

8. The friction material of claim 6, wherein the aramid fibers have average fiber lengths in the range of about 0.5 to about 10 mm.

9. The friction material of claim 6, wherein the filler comprises diatomaceous earth.

12. The friction material of claim 6, wherein the primary layer comprises about 10 to about 50%, by weight, less fibrillated aramid fiber; about 10 to about 35%, by weight, carbon particles; about 5 to about 20%, by weight, cotton fibers; about 2 to about 15%, by weight, carbon fibers; and, about 10 to about 35%, by weight, filler material.

13. The friction material of claim 12, comprising in percent, by weight, about 38 to 40% less fibrillated aramid fibers, about 13 to about 15% carbon particles; about 10 to about 12% cotton fibers; about 4-6% carbon fibers; and about 28 to about 30% filler material.

29. The friction material of claim 6 wherein the primary layer further comprises about 5% to about 35%, by weight, of partially carbonized carbon fibers, based on the weight of the primary layer, and

wherein the partially carbonized carbon fibers of the primary layer are 65 to 90% carbonized.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

No decision has been rendered by a court or the Board in any proceedings in related appeals and interferences.